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Enclosure of October 7, 2003

Your ref.: **TFN010150-DE / TSN 2001-0304-DE-00Z (TOYOTA)**Our ref.: **DE 33110**

German Patent Application No.: 101 60 556.0-41

Applicant: **TOYOTA JIDOSHA KABUSHIKI KAISHA****TRANSLATION****of the Official Letter of July 22, 2003
(rec'd August 14, 2003)**

In the present Official Letter the following references are mentioned for the first time (the numbering assigned thereto shall also be adhered to in the further course of the proceedings):

- (1) **JP2000021431A (abstract)** In: **Patents Abstracts of Japan**
- (2) **JP 04119902 A (abstract)** In: **Patents Abstracts of Japan**
- (3) **JP 03005301 A (abstract)** In: **Patents Abstracts of Japan**
- (4) **JP 02199001 A (abstract)** In: **Patents Abstracts of Japan**
- (5) **JP 02132770 A (abstract)** In: **Patents Abstracts of Japan**
- (6) **JP 02087480 A (abstract)** In: **Patents Abstracts of Japan**
- (7) **JP 63310704 A (abstract)** In: **Patents Abstracts of Japan**

By the set of claims comprising 36 claims, received on December 10, 2001 and claiming the priority of December 11, 2000, the applicant seeks patent protection according to claims 1 to 18 for a method for stopping operation of a hydrogen gas generating system, according to claims 19 to 34 for a hydrogen gas generating system and according to claims 35 and 36 for a fuel cell system.

First of all, it is to be pointed out that there are doubts about the **unity** of the subject matter of the application

necessary for the patenting, as the latter concerns two subject matters different with respect to object and solution, namely, on the one hand, a hydrogen gas generating system as well as a method for stopping operation of such a system, and, on the other hand, a fuel cell system. It is not apparent that these subject matters represent a group of inventions including a single inventive idea (section 34 of the German Patent Act). The applicant is requested to establish unity in the usual way (cancelling, dividing or reformulating claims 15 to 18 into use claims).

The following examination only refers to claims 1 to 18 and 19 to 27.

With respect to the claims, there are doubts about the measures restricted by conditional indications (... when ...). The Examining Division is of the opinion that, due to these conditional measures or features in the claims, it remains **unclear what concretely shall be placed under protection.** For instance, in view of the method according to claim 1, it is unclear what the skilled person has to do for being able to carry out the purging step with air for stopping the operation of the hydrogen gas generator. Which measures does he take if the demanded conditions are not fulfilled? How does he then stop the reformer? The same applies to the device claims. For instance, also according to claim 19, it is unclear whether, with respect to its features, the claimed device is further developed at all by the restriction "when it is determined that an environment condition is such that there will be no effect ...". As the Examining Division sees it, this supplement seems to be superfluous.

Thus, in view of these deficiencies, the present claims 1 and 19 do not seem to be allowable in their present form.

With respect to the prior art, it is referred to (1) to (7). For completing the reformation, these references inter alia disclose the purging with hydrogen (1), with inert gas (3), (4), the pressurization of the reformer to a pressure higher than atmospheric pressure using the fuel gases so that no external air can diffuse into the system (6), or cooling the reformer (7) by admixing a heat exchanger fluid of low temperature to the heat exchanger fluid (7) of high operating temperature.

Particular reference is to be made to (5) which discloses the termination of the reformer operation by passing excess air through the catalyst of the reformer. In this connection, the latter is cooled to such an extent that the catalyst temperature falls below the temperature necessary for the reformation so that a reformation can no longer take place.

With respect to the method known from (5) and the device known therefrom, there are, independent of the formal doubts, also doubts about the **novelty** necessary for the patenting, as the prior art known from (5) anticipates and at least suggests the claimed method and the claimed device according to claims 1 and 19.

In view of this state of affairs, claims 1 and 19 are not allowable.

After claims 1 and 19 have been dropped, the remaining subclaims which refer back thereto do not reveal any independently patentable matter, as, compared to the knowledge of the skilled person and with respect to the

known prior art, they seem to be purely exemplary in the catalytic reformation of alcohols or hydrocarbons for generating hydrogen for the operation of fuel cells.

If the applicant still perceives some patentable matter in their application compared to the traced prior art, they are requested to submit corresponding claims including a detailed substantiation of the inventive activity, with the formal doubts being eliminated.

In view of the present state of affairs, the grant of a patent is not possible on the basis of the presently valid documents.

Examining Division for class C01B

Dr. Koszinowski

Enclosure: Copy of 7 references